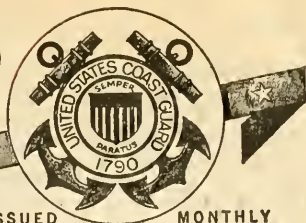


T 47. 21 : 13 27
Jun 13 '47

COAST GUARD BULLETIN



ISSUED

MONTHLY

Volume 3

WASHINGTON, JUNE 1947¹

Number 24

COAST GUARD PARTICIPATES IN NATIONAL MARITIME DAY CELEBRATION

National Maritime Day, which was observed throughout the Nation on May 22, was observed by the Coast Guard by all its vessels which were in commission dressing ship, and by the participation of Coast Guard personnel in various local exercises.

Admiral Joseph F. Farley, Commandant of the Coast Guard, issued the following statement:

"It is indeed fitting and proper that the Coast Guard join the Nation in setting aside May 22 for the observance of National Maritime Day. In doing so, the Coast Guard stresses the importance to the national welfare of a well-balanced, safe, and modern merchant marine. The Nation needs this kind of merchant marine for world and domestic trade and for its own safety and security."

"MENDOTA" ON ICE PATROL SIGHTS FEW BERGS IN NORTH ATLANTIC

The Coast Guard cutter *Mendota*, on International Ice Patrol, sent out a message on May 17, to the effect that little ice had been sighted. Her cruise started in latitude 44° north, and it was expected that ice would not be encountered until the ship was well north of that parallel.

The *Mendota* is operating out of Argentia, Newfoundland, while on ice patrol duty, but her home port is Wilmington, N. C. A postseason ice and oceanographic survey will probably be undertaken by the *Mendota* to collect data not obtained during the war years. This survey would take the ship far north of the Arctic circle, along the west coast of Greenland, and into Baffin Bay.

SEA AND AIR ACTIVITIES OF COAST GUARD ARE DESCRIBED AT FRANKLIN INSTITUTE

Coast Guard activities on the sea and in the air were subjects covered by several Coast Guard speakers at a meeting of the Franklin Institute of Philadelphia on May 16.

Following introductory remarks by Director Allen of the Franklin Institute, Rear Admiral McElligott, from headquarters, explained the purpose of the program. The meeting was attended by members of the Franklin Institute and their guests.

A motion picture film "Radar for Navigation" was followed by remarks on the same subject by Lt. Comdr. Loren E. Brunner, and by a talk on Loran by Lt. Comdr. Guy L. Ottinger. Capt. Richard L. Burke talked on search and rescue activities, after which the search and rescue board was demonstrated.

The speakers were held over an additional day and repeated their talks before a session thrown open to the general public.

AMERICAN NEWCOMEN SOCIETY HONORS SUPERINTENDENT OF COAST GUARD ACADEMY

The American Newcomen Society honored Rear Adm. James Pine, USCG, Superintendent of the Coast Guard Academy, and vice chairman of the Connecticut Committee of the Newcomen Society of England, at a luncheon held in New York on May 9.

Adm. J. F. Farley, USCG, Commandant of the Coast Guard, and a member of the Washington Committee of the Newcomen Society, introduced Rear Adm. Pine. The Secretary of the Treasury, John W. Snyder, was unable to attend, but a message from him was read by Mr. E. H. Foley, Jr.,

¹ Published with the approval of the Director of the Budget.

Assistant Secretary of the Treasury. This message follows:

"The Treasury Department is proud of the honor which is being paid today to Rear Adm. James Pine by the Newcomen Society. Your society has been a constant source of encouragement and support to the Coast Guard Academy which Rear Adm. Pine commands, particularly through the establishment of the annual Newcomen lectures and the Newcomen award in physics.

"The gallant and splendid leadership displayed by graduates of the Academy in the recent war has added honor to the already honored name of the Coast Guard. The outstanding part that Rear Adm. Pine has played in this training must be a source of immense personal satisfaction to him. The cadets instructed under his command have as officers lived up to the finest traditions of the Coast Guard motto "Semper Paratus"—prepared to serve their country equally in war and in peace.

"I deeply regret I could not be present with you today as you pay tribute to the distinguished career of Rear Adm. Pine. I take this opportunity of sending congratulations to him and my best wishes to your society."

IMMRAN AGREEMENT ACCORDS WITH UNITED STATES VIEWS ON RADIO AIDS TO NAVIGATION

The International Meeting on Marine Radio Aids to Navigation, held in New York and New London during April, reached agreements upon certain radio aids to navigation devices and systems which accorded very closely with United States views on these matters. At the conclusion of the meetings, agreements had been reached on nearly all of the approximately 30 items submitted to the conference. On only four topics were exceptions made, and after these had been redrafted, agreement was reached.

The following were among the important points on which agreement was reached:

(a) The adoption by IMMRAN of the 3, 5, and 10 cm. bands for the continued investigation of the most suitable radar frequency.

(b) The rejection by IMMRAN of the premise that government control of radar specifications and licensing was required in order to insure the quality of equipment.

(c) The continuance of radio beacons and medium-frequency direction finding as a medium distance position fixing system.

(d) The adoption of the conclusion that standard Loran gives higher accuracy within its effective coverage area than does Consol and that, therefore, standard Loran as a long range navigation system should be continued, improved and expanded wherever it can jointly serve both marine and aviation interests to mutual advantage, with the agreement of the nations concerned.

(e) The adoption of the opinion that there was a need for an international standard ship-to-ship and ship-to-shore radio-telephone channel in the 150-160 megacycle region. This channel or channels were believed necessary for harbor control of shipping, safety, distress, and navigational communications on rivers and lakes as well as on the coasts of the various countries.

The meeting, under chairmanship of Dr. William L. Everitt, University of Illinois, was opened by Assistant Secretary of State, Garrison Norton, with a welcoming address and an address by Sir Robert Watson-Watt, leader of the United Kingdom delegation. Both expressed a desire for international agreement on radio navigational aids and systems and stressed the fact that the United States and United Kingdom would make available to any country all technical information held by either on any internationally adopted devices.

At the close of the week, it being realized that little time was left in which to reach international agreement on some phases of standardization of radio aids to navigation, the chairman, appointed a steering committee consisting of the following members:

Brazil: Capt. Jose Paul DeAlbuquerque Gillobel.

Canada: Mr. A. N. Fraser.

China: Mr. Wei Huan-Chang.

Denmark: Capt. J. Hauptmann-Andersen, D. R. M.

France: M. Loranchet.

Greece: Lt. Georges Sabassakos (Navy).

Netherlands: A. J. W. Vanantrooy.

United Kingdom: Denis O'Neill.

USSR: Mr. Ryzhko.

United States: E. M. Webster.

Recorder: Lt. A. H. Graham, USCG.

During the first meeting of the above steering committee, three subcommittees were appointed. The duty of drafting conclusions, recommendations and views for presentation to the body of IMMRAN for consideration and adoption was delegated as follows:

Committee A; chairman, M. Loranchet (France): To have cognizance of all matters pertaining to radar.

Committee B; joint chairman-

ship, Denis O'Neill and E. M. Webster (United Kingdom and United States representatives): To have cognizance of position fixing systems and devices other than radar.

Committee C; chairman, Capt. J. Hauptmann-Andersen (Denmark): To have cognizance of all matters not coming within the purview of committees A and B.

The last 2 days of the conference were devoted to the presentation, discussion and adoption of the conclusions and recommendations as drafted by subcommittees A, B, and C. On only 4 of approximately 30 items presented to the body of IMMIRAN were any exceptions made. The balance were adopted by unanimous vote. The items which contained controversial matter were sent back to committee for re-drafting. The new drafts were adopted.

The success achieved was greater than that expected and is believed due, to a large extent, to the demonstrations of equipments during the New London phase of the conference. The entire demonstration program was well conceived and executed with a high degree of efficiency. The opportunity for each delegate to operate the equipments, particularly Loran, to obtain results and evaluate them for himself, constituted a decisive argument in favor of the claims for the equipment.

658 YOUNG MEN THROUGHOUT THE COUNTRY TAKE CADET EXAMINATIONS

A total of 658 young men took the examinations for appointment as cadet and entrance to the Coast Guard Academy throughout the country on May 7 and 8. Examination papers are now being graded at New London and it is expected that notices will have been sent to all those who took the examination by the middle of June stating whether or not they passed the examinations and when they are to report to the Academy.

Examinations were given in the following cities throughout the country, the figures indicating the number of men appearing at each place:

Portland, Maine	5
Boston, Mass.	79
New London, Conn.	40
Buffalo, N. Y.	26
New York, N. Y.	160
Philadelphia, Pa.	58
Pittsburgh, Pa.	24
Baltimore, Md.	13
Washington, D. C.	37

Norfolk, Va.	8
Charleston, W. Va.	3
Raleigh, N. C.	4
Atlanta, Ga.	4
Savannah, Ga.	2
Jacksonville, Fla.	7
Tampa, Fla.	5
Miami, Fla.	9
Mobile, Ala.	1
Nashville, Tenn.	2
Louisville, Ky.	1
New Orleans, La.	1
Shreveport, La.	1
Jackson, Miss.	1
Cincinnati, Ohio.	3
Cleveland, Ohio.	23
Detroit, Mich.	11
Sault Ste. Marie, Mich.	1
Indianapolis, Ind.	4
Chicago, Ill.	20
Milwaukee, Wis.	14
St. Paul, Minn.	6
Des Moines, Iowa.	3
St. Louis, Mo.	10
Kansas City, Mo.	3
Little Rock, Ark.	1
Pierre, S. Dak.	3
Omaha, Nebr.	2
Oklahoma City, Okla.	2
Dallas, Tex.	3
San Antonio, Tex.	2
Denver, Colo.	6
Santa Fe, N. Mex.	2
Seattle, Wash.	4
Portland, Oreg.	3
San Francisco, Calif.	11
Los Angeles, Calif.	19
Honolulu, T. H.	6
Ketchikan, Alaska.	1
San Juan, P. R.	3
Cutter <i>Duane</i>	1
Total	658

AUXILIARY FLOTILLA RENDERS ASSISTANCE IN RECENT MICHIGAN FLOOD

When the Clinton River reached flood stage early in April, and threatened a large area of Mount Clemens, Mich., Coast Guard Auxiliary Flotilla 13-03 undertook the task of evacuating residents and otherwise rendering assistance. Flotilla members were alerted and an operating office opened. Within 3 hours' time rowboats, with and without outboard motors, were in operation, and residents were being warned to prepare to leave the area if the water continued to rise. Other boats were soon secured from the Coast Guard base in Detroit.

Before the day was over, Flotilla 13-04 offered to assist in the operations, and personnel were soon at work. By midnight the Clinton River had become

a raging torrent, and the equipment available became totally inadequate. High-wheeled troop carriers were then obtained from the Army, and a crash boat was offered but could not reach the scene where it was most needed. A motor lifeboat from the Belle Isle Coast Guard Station was next sent in, and then two Ducks and two amphibian Weasels were secured from the Detroit Tank Arsenal.

The total number of person evacuated during the flood was approximately 600, and there was no loss of life. All rescue operations were in the hands of the Auxiliary.

All activity on the Coast Guard glider-borne lifeboat project will be terminated in the near future. This action is being taken in view of the curtailment of appropriations for the fiscal year 1948. It is expected that the project will be reactivated at some future date when funds may be made available.

NAME OF HEADQUARTERS MERCHANT MARINE PERSONNEL DIVISION CHANGED

To avoid the confusion arising from many persons assuming that the headquarters Merchant Marine Personnel Division had cognizance of personnel assigned to merchant marine inspection duties, the name of this Division has been changed to Merchant Vessel Personnel Division. The functions of this Division have to do with licensing and certificating of merchant marine personnel, shipment and discharge of merchant seamen, the discipline of merchant seamen, and the maintenance of the central records section of merchant seamen records.

COMMANDER LEON H. MORINE RECEIVES NAVY COMMENDATION RIBBON

Commander Leon H. Morine, USCG, was decorated with the Navy commendation ribbon at a ceremony at headquarters on May 20. Presentation was made by Rear Adm. Raymond T. McElligott, USCG, Chief, Office of Personnel. The citation accompanying the commendation ribbon read as follows:

"For excellent service in the line of his profession while serving as executive officer of the U. S. S. *Cavalier* from January 1944 to May 1945. His professional skill and devotion to duty contributed materially to the success of his vessel during participation in the assault and capture of Saipan, Tinian,

and Leyte. All men and supplies were unloaded on a pre-arranged schedule, despite intermittent heavy mortar fire and concerted enemy aerial attacks. His performance of duty was outstanding and his conduct was at all times in keeping with the highest traditions of the United States naval service."

Underway trials of the U. S. S. *Edisto*, the Navy icebreaker similar to the *Northwind*, were held successfully on March 13; preliminary acceptance was authorized as of March 20.

CLAY L. JENNISON, ASSISTANT TO THE CHIEF OF NAVAL ENGINEERING DIVISION, LEAVES HEADQUARTERS

Clay L. Jennison, an employee of the Coast Guard since October 1914, and recently civilian assistant to the Chief of the Naval Engineering Division at headquarters, has been separated from the service. Mr. Jennison, upon his graduation from the Webb Institute of Naval Architecture and Marine Engineering, took a position as a marine draftsman in a navy yard in 1914, but left that post a few months later to take up similar work in the Coast Guard. He rose through various positions in that field to that of assistant to the Chief of the Division of Naval Engineering.

In 1936 Mr. Jennison attended the Fourth International Lifeboat Conference, after which he made a tour of several European countries to study lifesaving methods, as a representative of the Coast Guard. He is a past president and member of the Washington Society of Engineers, and a member of the American Society of Naval Engineers.

During World War II, Mr. Jennison remained at Coast Guard headquarters and was commissioned successively a commander and captain in the Coast Guard Reserve (T).

SICILY-ITALY LANDINGS A NEW WAR HISTORY MAKES ITS APPEARANCE

The latest section of the Coast Guard's History of World War II, entitled "Sicily-Italy Landings," has just made its appearance. This preliminary history is a book of 261 pages, with many illustrations, intended for distribution chiefly within the service. This first draft is being distributed in order that material still not at hand at Head-

quarters may be obtained from personnel now widely scattered.

This history of the Italian campaign is divided into three main sections, the Sicilian landings, the Salerno landings, and the Anzio landings. The appendices are quite voluminous, and include histories of a number of individual ships, letters throwing light upon the landing operations, and much material best presented in tabular form.

Headquarters representatives appeared before the National Inventors Council on March 21, 1947, and presented some of the testing and development problems of the Coast Guard to that group. Moving pictures of the recent tests of the DUKW were shown.

FIRST MINE LAYER TO BE CONVERTED AS TENDER MAKES TRIAL RUNS

The cutter *Jouquil*, a former mine layer just being converted for service as an aids-to-navigation tender, was given trial runs at Charleston, S. C., on May 1, and was ready for sea on May 16. This is one of six vessels originally built for the United States Army as mine planters, and later turned over to the Navy and operated on similar duty in the Pacific, five of which the Coast Guard will convert to aids-to-navigation tenders, and the sixth of which will become a cable-laying ship.

Present at the trial runs of the *Jouquil* were Rear Adm. Ellis Reed-Hill, Coast Guard Engineer-in-Chief; Capt. R. B. Lank, of the headquarters Engineering Division; Lt. Comdr. A. E. Engle, and Mr. Ralph B. Moore. Conversion work on the ship had been done at the Charleston Navy Yard, and the trial runs were made in the Cooper River and off the entrance to Charleston Harbor.

The group of mine layers, of which the *Jouquil* is one, are vessels about 190 feet in length, and having a draft of about 12 feet loaded. They are twin screw ships having steam engines of the uniflow type. Their service speed will be about 11 knots. Originally built at Marietta, Ohio, the *Jouquil* was modified first by the Navy and secondly by the Coast Guard. Important among the last changes was the fitting of the heavy boom on the tubular steel foremast for the handling of buoys. The fittings for this boom, and the hoisting engine, were salvaged from a now decommissioned tender class cutter.

Five of these mineplanters will be used by the Coast Guard to replace a

like number of older tender class cutters, which also had been mine planters prior to their acquisition by the Lighthouse Service at the close of World War I. The present group of vessels will have the names *Jouquil*, *Ivy*, *Heather*, *Magnolia*, *Willow*, and *Yamacraw*. The *Yamacraw* will replace the Coast Guard cable-laying vessel *Pequot*. The tender class cutters of World War I period which are being replaced are the *Ilex*, *Spruce*, *Lotus*, *Acacia*, and *Lupine*. The new *Ivy* is now en route from the Pacific to the Atlantic coast, and the *Magnolia* will be converted on the Pacific coast.

FIRST MEETING OF PERMANENT INTERNATIONAL AVIATION ORGANIZATION HELD

The first meeting of the permanent International Civil Aviation organization, which replaces the Provisional International Civil Aviation Organization, was held in Montreal, on May 5.

The permanent organization was brought into force when on March 4 of this year, a total of 32 nations had deposited their instruments, bringing the convention into force a month later. In this country, the convention had been consented to and ratified by the Senate, Seventy-ninth Congress, Second Session, on July 25, 1946, and ratified by the President on August 6 of that year. In the same month, the United States deposited its instruments with the State Department. The convention was to come into force when it had been ratified by a majority of the countries interested.

The Coast Guard was represented at the Montreal meetings by Lt. J. M. Waters of the headquarters office of the Search and Rescue Agency, who was in charge of an exhibit illustrating the coordinated procedure employed by the service in rescue work. This exhibit was set up at the Hotel Windsor, where the conference sessions were held, and was demonstrated to all the delegates. Lieutenant Waters also talked to various groups upon the work of the Coast Guard.

F. P. DILLON TO SURVEY AIDS TO NAVIGATION IN THE DOMINICAN REPUBLIC

Commodore Frederick P. Dillon, USCG (ret.), has been detailed by the State Department effective April 28, 1947, in a temporary civilian governmental capacity as lighthouse engineer for a period of 3 months to assist and advise

the Dominican Government in connection with a survey of navigational aids.

Commodore Dillon entered the Federal civil service as assistant civil engineer, Quartermaster Corps of the United States Army, August 17, 1908, and was promoted to civil engineer and superintendent of construction. He entered the former Lighthouse Service March 16, 1911, as assistant superintendent of lighthouses and served as superintendent of lighthouses in Puerto Rico, on general duty, and in Detroit, Mich.

In World War I he was detailed to the Fifth Naval District for duty.

On December 14, 1939, he resigned the position of superintendent of lighthouses (principal lighthouse engineer in the civil service) to accept a commission as commander in the United States Coast Guard. He was advanced to captain and commodore and was Chief of the Aids to Navigation Division in Operations from July 1942, until his retirement August 1, 1946. During World War II the operation of aids to navigation for military purposes was carried out in a period of extraordinary expansion in the United States, Caribbean Sea area, Pacific Ocean areas, Alaska, and the Philippine Islands. The system included some 36,000 aids and the Loran system and contributed much to the winning of the war.

Commodore Dillon received a citation from the Secretary of the Navy for outstanding performance of duty as Chief of the Aids to Navigation Division during this period.

COAST GUARD PERSONNEL WHO RESIDED IN RHODE ISLAND ELIGIBLE FOR BONUS

Personnel of the Coast Guard who were residents of the State of Rhode Island for not less than 6 months immediately prior to their entry into the service and who served during the period beginning September 16, 1940, and ending September 2, 1945, may be eligible for a \$200 bonus under the Rhode Island 1946 Veterans Bonus Act. Members of the Public Health Service serving with the Coast Guard are also eligible, as are personnel of the Army and Navy and merchant marine.

Application for this bonus must be filed with the chairman of the veterans bonus board, room 127 State House, Providence, R. I., before June 30, 1947.

An unforeseen advantage of the Coast Guard's flood-relief plan, under which equipment is assembled each year during the season of possible floods in the Mississippi River Basin,

was the sending of planes held for this purpose with medical relief for victims of the Texas City, Tex., disaster.

COAST GUARD PLANE MAKES MERCY FLIGHT IN NEW- FOUNDLAND

An emergency medical case was handled expeditiously and successfully by the Coast Guard air facility at Argentia, Newfoundland, on April 7, in spite of adverse weather conditions. The following dispatch was received:

"Very urgent. Can you possibly send plane to Stag Harbor, Fogo Island (Newfoundland) today to take a very urgent case to hospital? A midwife case that requires immediate operation. Will you please reply as soon as possible? The harbor is good and open to the southwest."

At this time the Argentia weather was very poor, yet the emergency seemed to justify the flight. Lt. (jg) R. O. Douglas at his own discretion considered that the flight could be successfully made and took off at 1630 into light rain and snow which reduced the ceiling to 100 feet and visibility to one-half mile. The plane encountered heavy icing as soon as it became airborne, with glaze ice building up on struts, cowlings, and antennas to a depth of several inches in some places. Instrument flight was maintained as far as Gander, where improved weather permitted the remainder of the flight to be made under contact conditions. At 1740 a landing was effected at Stag Harbor. A launch carried the patient, doctor, and nurse to the plane and at 1820 the plane was airborne with Gander as its destination. Dispatches from the plane advised Gander officials that an ambulance should be in readiness and that immediate hospitalization was necessary. The PBY landed at Gander at 1842, and the patient was reported to have been on the operating table within 10 minutes time.

TENDER "KUKUI" IS SOLD AFTER 39 YEARS SERVING AIDS TO NAVIGATION

The tender class cutter *Kukui*, which has been engaged in the work of servicing aids to navigation in the Hawaiian Islands since it was first built 39 years ago, has been decommissioned and sold. This vessel, one of a group of eight tenders built for the Lighthouse Service in 1908, was a twin screw steam vessel of 938 tons displacement, costing originally \$213,880.

The *Kukui* and her sister ships were

constructed by the New York Shipbuilding Co., at Camden, N. J., and were among the most successful of the various classes of tenders designed by the former Lighthouse Service, being particularly useful for the working of buoys in the open sea.

TWO COAST GUARDSMEN GET TOKEN PRESENTATIONS OF VICTORY MEDAL

Token presentations of the Victory Medal for World War II, were made to personnel of the Coast Guard, Navy, and Marine Corps, at the Iwo Jima Monument in Washington on May 15. The Coast Guard personnel selected for these token presentations were Arthur B. Arnold, BM1c, who served in the Pacific, and in Sicily and Italy; and Lt. Benjamin M. Chiswell, USCGR, who served in Greenland, the Southwest Pacific, and Alaska.

Presentations of the medals were made by Assistant Secretary of the Navy W. John Kenney.

REPLICAS OF PLAQUES COMMEMORATING JAP SURRENDER ARE GIVEN ACADEMY

Replicas of the original tablet and plaque placed aboard the U. S. battleship *Missouri* to commemorate the ceremonies in which the Japanese surrendered in Tokyo Bay on September 2, 1945, have been presented to the Coast Guard Academy. The formal presentation was made to the Academy by Rear Adm. James Fife, USN.

The original tablet and plaque were cast at the Naval Gun Factory, in Washington, D. C., where the replicas were also made. The plaque was sunk in the deck of the *Missouri* to mark the location of the table on which the surrender documents were signed. The tablet, bearing a brief record of the events, was mounted on a nearby bulkhead.

At the Coast Guard Academy, the replicas are being mounted in the lobby of Hamilton Hall, where they serve as mementoes of the participation of Coast Guard personnel in the military operations in the Pacific.

SHIP STRUCTURE COMMITTEE REPORT CONTAINS IM- PORTANT FINDINGS

The following abstract of the final report on the Design and Methods of Construction of Welded Steel Merchant Vessels, shows the importance of this subject to the Coast Guard as the

merchant vessel inspection agency, as well as a user of vessels in which welding is employed.

Early in the war certain welded merchant vessels experienced structural difficulties in the form of fractures which were not readily explained. These fractures in many cases manifested themselves with explosive suddenness and exhibited a quality of brittleness which was not ordinarily associated with the behavior of a normally ductile material such as ship steel.

The seriousness of this structural failure problem may be gauged by the fact that out of approximately 5,000 ships constructed in the course of the war, about one-fifth sustained casualties. Of these casualties, 127 were classified as serious. Eight vessels were lost, but it is extremely fortunate that only 26 persons lost their lives. Contrary to widespread belief, the fracture menace did not confine itself to Liberty ships but involved vessels of all types.

Since the fractures sustained occurred under normal operating conditions and were not the result of battle damage, it was evident that their implications might have been far reaching and have had a signal effect upon the war effort. Accordingly, in April 1943, a board was appointed by the Secretary of the Navy to investigate the circumstances surrounding the structural failures reported. This board was formally known as the Board to Investigate the Design and Methods of Construction of Welded Steel Merchant Vessels, and consisted of: The Engineer in Chief, United States Coast Guard, as chairman; and the Chief of the Bureau of Ships, United States Navy; the Vice Chairman, United States Maritime Commission; and the vice president, chief surveyor, American Bureau of Shipping, as members.

The investigation of this Board has been in progress for more than 3 years. During that time two interim reports were made to the Secretary of the Navy. A final report covering the Board's activities has been submitted to and approved by the Secretary of the Navy and the following facts are abstracted from that report.

During the course of the inquiry, many research projects were initiated under the National Defense Research Committee. These projects were carried out with the services of the Welding Group of the War Metallurgy Committee at the National Research Council. In utilizing the facilities of the War Metallurgy Committee, the Board was able to bring to bear on its

problems some of the best scientific minds in the country. Through a complete coordination of effort in research, results were obtained in a minimum of time. Close liaison was maintained throughout the investigation with the British and with other Allied Nations who were concerned with the operation of welded merchant vessels.

The over-all designs of merchant vessels were checked by recalculation of the longitudinal strength and by means of static structural tests on certain vessels. It was found that there was a margin of strength in every case over that required by existing standards and that the basic analytical method used in calculating the strength of the hull girder is valid.

In the investigation of detail design, it became apparent that the monolithic character of the welded ship resulting from the method of fabrication can produce high stress concentrations and severe restraint, thereby tending to inhibit plastic flow. This condition did not exist generally in the riveted ship. The danger of high concentration at points of structural discontinuities in the welded ship is further aggravated by welding usually present at such points. Every fracture examined started in a geometric discontinuity or notch resulting from unsuitable design or poor workmanship.

The investigation pertaining to structural details has strongly emphasized that too much attention cannot be paid to the elimination of discontinuities or notches, whether they be small or large, and that the effect of discontinuities is aggravated by welding.

Studies indicated that steel as furnished to shipyards complied in every respect with present physical requirements. In spite of this, impact tests of steel samples taken from vessels which had suffered fractures indicated that in many cases the steel was notch sensitive. In addition, it was found that some steels furnished to shipyards were also notch sensitive. There is a necessity for the establishment of a new specification to include a practical test for the evaluation of the notch sensitivity of commercial steels.

There is no indication that inferior quality or misapplication of welding electrodes was responsible for welded ship fractures. This does not mean, however, that an improvement in electrodes and covering materials might not be beneficial.

The use of welding in the construction of merchant vessels during the war permitted the launching of an enormous fleet of ships which played a

vital part in the winning of the war. There are, however, certain disadvantages connected with welding which were not fully realized at the outset. Although the technique of depositing weld metal and the application of welding sequences to minimize shrinkage, distortion and cracking were fairly well understood, relatively little was known of deleterious conditions accompanying the welding processes on large ship structures. Consequently, when fractures in all-welded steel merchant vessels first began to manifest themselves (as in the *Schenectady* and the *Esso Manhattan*), conditions were found which did not conform to previous experience. There was a general feeling that the accelerated shipbuilding program and the concomitant quantity production of all-welded ships had resulted in a general disregard for proper construction procedures and workmanship. It was particularly felt that insufficient care was being devoted to welding sequences with the result that locked-in stresses were present in many ships to a higher degree than would be expected. The presence of these higher stresses was believed to be an important factor in the incidence of the observed fractures. The results of the investigation, however, have not substantiated this belief.

Although a large amount of work was conducted in the investigation of residual and locked-in stresses resulting in a considerable extension of knowledge in this respect, no evidence has been found to indicate that these stresses are important in causing the fractures of welded ships.

The feeling that workmanship had suffered due to the pressure of wartime production programs was substantiated. The importance of maintaining adequate standards of workmanship has been clearly established by the analysis of structural failures in the past 3 years. Poor workmanship engenders fractures since a fracture may originate at a small notch such as occasioned by peened-over cracks and under-cut welds, by porosity and inclusions in the welds, or by "saddle" welds resulting from incomplete penetration, which leaves voids in the center of the joints. High quality workmanship is still an important need in the building of welded ships.

A study of operating conditions resulted in the finding that loading and ballasting procedures did not create abnormal bending moments.

The wartime operation of cargo ships in convoys and overseas routes which are only infrequently used in normal times imposed unusual hardships on

the vessels, especially during the early part of the war when convoys were being routed through extremely cold waters where heavy seas prevailed during the winter months. The highest incidence of fractures occurred under the combination of low temperatures and heavy seas. The risks involved were accepted as far as heavy seas were concerned, but at the start the adverse effects of low temperature were not fully appreciated. When these facts were recognized, vessels modified to increase their resistance to fracture were assigned to the more rigorous trade routes.

The Board concluded that the fractures in welded ships were caused by notches built into the vessels, either through design or as the result of workmanship practices, and by steel which was notch-sensitive at operating temperatures. When an adverse combination of these factors occurs, the ship may be unable to resist the bending moments of normal service.

The serious epidemic of fractures in the steel structures of welded merchant vessels has been curbed through the combined effect of the corrective measures taken on the structure of ships during construction and after completion, improvements in design and improved construction practices in shipyards.

The results of the investigation have vindicated the all-welded ship. Statistics show that the percentage of ships sustaining serious fractures is small. With proper detail design, high quality workmanship and a steel which has low notch sensitivity at operating temperatures, a satisfactory all-welded ship structure may be obtained.

However, until experience can be had with vessels constructed under normal conditions of improved design, materials and workmanship, some form of crack arrestor, such as a riveted gunwale angle, should be incorporated in the hull girder of all large welded vessels.

The research program conducted in connection with the investigation has produced at least partial answers to most of the more urgent questions and has given an adequate solution for the purposes of the Board. It now becomes necessary to assure the continuance and the extension of this work. Paths have been indicated along which real improvement can be made in structural designs, materials and fabrication methods. The Board has been dissolved—it cannot follow these leads—however it is important that we maintain our present position in maritime

affairs and protect our standing in world-wide competition by continuing fundamental research work on design and methods of construction of steel ships. Accordingly, the Secretary of the Treasury has appointed a committee to carry on the work of the Board. It has been designated as the Ship Structure Committee. This committee is jointly controlled and financed by the agencies which comprised the Board, namely, the Bureau of Ships, United States Navy, the United States Coast Guard, the United States Maritime Commission, and the American Bureau of Shipping.

LIGHTSHIP "NO. 54," LONG ON BOSTON STATION IS RETIRED FROM SERVICE

Lightship *No. 54*, for many years familiar to mariners as Boston Lightship, has been decommissioned and declared available for disposal having seen 55 years of service.

Built in 1892, at a cost of \$62,000, the ship was 118 feet in length, and of 310 gross tons. It was one of a very few United States lightships having a single tubular mast amidships surmounted by a large lantern housing the lens.

Lightship *No. 54* occupied the Boston Lightship Station for the major part of the time since the station was first established in 1892. While this station was not as fully exposed to the sweep of the open sea as some others in this country, the ship was moored in 144 feet of water, a greater depth than that prevailing on more than half the lightship stations.

The old lightship had its share of near collisions, minor damage, and even serious disaster. On December 20, 1935, it was collided with by the British steamer *Seven Seas Spray*. The lightship was seriously cut into amidships, from the rail to a point 4 feet below the waterline, but through the efforts of the crew was prevented from sinking, and was safely towed to port.

During World War II, Lightship *No. 54* was held as a relief lightship but was restored to the Boston Lightship Station in September 1943. It was finally removed from station in July 1945.

STATE OF MICHIGAN HAS AUTHORIZED BONUS FOR WORLD WAR II

The State of Michigan has recently enacted legislation providing for the payment of a bonus to members of the military services who were residents of

Michigan at the time of entrance into the service and for not less than 6 months prior thereto. This bonus is payable to those who served for more than 60 days during the period between September 16, 1940, and June 30, 1946. Applications for this bonus may be obtained from the bonus and military pay division, adjutant general's office, Lansing, Mich. Applicant must specify the branch of the armed services in which he served when requesting the proper forms.

LT. CHARLES W. RINACA DIES

Lt. Charles W. Rinaca, USCGR, who retired for disability about a year ago, died at the Marine Hospital, Baltimore, Md., on May 14, and was buried in the Arlington National Cemetery, Va., on the 16th.

Lieutenant Rinaca was born in Sparrows Point, Md., but had been a Washington resident for many years. Prior to the war he was employed in a civilian capacity at Coast Guard headquarters. He was commissioned in the Reserve in 1942, and assigned to an 83-foot patrol boat. The following year he was transferred to an LCI, and participated in the invasion of Tunisia, Sicily, Salerno, and Normandy.

DEATH OF CAPT. H. N. WOOD

Capt. Horatio Nelson Wood, USCG (ret.), died on April 12, in veterans' hospital, Oakland, Calif., and was buried in the Golden Gate National Cemetery, in that city. Captain Wood was born on August 23, 1869, and was commissioned in the Revenue Cutter Service on December 14, 1894. He served as an engineer officer until his retirement on September 1, 1933.

NEW ROCKET PROPELLED PARACHUTE FLARE IS DEMONSTRATED

A demonstration of a new rocket-propelled parachute flare distress signal was witnessed by representatives of the Coast Guard Testing and Development Division, the Search and Rescue Agency, Merchant Vessel Inspection Division, the Merchant Marine Technical Division, and others, at the Anacostia Naval Air Station, Washington, D. C. on April 24.

Approximately a dozen flares were demonstrated, all of which could be considered successful with one exception.

Signals are cylindrical in shape, have an aluminum shell and are approximately 11 inches long by 1½ inches

diameter. The construction of the shell insures watertightness. A cap at one end is removed by turning a soldered key. Removing this cap and fitting it on the opposite end it serves as a firing pin. The shell can be held in one hand and, by tapping the firing cap with the palm of the hand, ignition is effected. Little or no recoil was noticeable upon firing. The initial powder charge ejects the signal vertically approximately 15 to 18 feet after which the rocket propellant thrusts the signal to its maximum trajectory. At approximately the apex of the trajectory the parachute and pyrotechnic candle are expelled from the shell.

The characteristics of the signal as given by the company representative are as follows:

Altitude at apex of trajectory,
800 to 1,000 feet.

Candlepower of pyrotechnic candle,
20,000 candlepower.

Color of burning candle, vivid red.

Rated burning time, 35 seconds.

Size of parachute, 16-inch hemisphere.

Rate of descent of parachute and
candle, no estimate given.

Weight, 17 ounces.

The Coast Guard's radio direction finder network in the Caribbean Sea has been disestablished. This net consisted of Goat Island Radio Direction Finder Station, Jamaica; St. Lucia Radio Direction Finder Station; and Antigua Radio Direction Finder Station.

DECORATIONS AND AWARDS MADE SINCE APRIL

LEGION OF MERIT

Coffin, Eugene A., commodore.

BRONZE STAR MEDAL

Hellman, Paul B., lieutenant (bronze star medal with combat "V" in lieu of commendation ribbon).

Cole, Norman R., lieutenant commander (R).

Day, Robert B., lieutenant (junior grade) (R).

AIR MEDAL

Ellery, Richard O. AOM2c.

Hucks, Frank B., AOM2c.

Tracy, George R. A., AMM1c.

Widener, Eugene A., AMM2c.

Williams, Winford C., ARM1c.

COMMENDATION RIBBON

Carroll, Donald J., S2c (awarded February 1945).

Morine, Leon H., commander (ribbon with combat "V").
 Rice, Richard H., QM1c.
 Shea, John M., AOM1c (R).
 Stewart, Gustavus U., captain (retired)
 Williams, Jr., Raymond L., CEM (R) (awarded February 1945).
 Wisniowski, Fred F., S1c (R) (awarded July 1944).
 Woodson, Jeston V., CGM (awarded July 1944).

PRESIDENTIAL UNIT CITATION

Dexter, Dwight H., commander.

CHANGES IN VESSEL STATUS

Cottonwood (former WAGL-209)

Sold at Paris, Tenn., on May 1. Formerly stationed at Chattanooga.

Kukui (former WAGL-225)

Sold at Honolulu, T. H. Formerly stationed at Honolulu.

Arundel (WYT-90)

Reactivated and assigned permanent station at Bourne, Mass., on May 8.

Kaw (WYT-61)

Placed "in commission in reserve" at Boston, Mass. Upon completion of availability, will take station at Portland, Maine.

Lightship No. 115

Completed extensive repairs at yard, and on May 11 was reported enroute to take station as Frying Pan Shoal Lightship.

CG-83486

Placed "in commission in reserve" at Boston, Mass., on May 7.

Pine (WAGL-162)

Ordered "in commission in reserve" at Boston, Mass., on May 12.

Lightship No. 189

Scheduled to depart Detroit, Mich., for the Fifth District about 13 May.

Algonquin (WPG-75)

Placed "out of commission, in reserve" at Boston, Mass., on April 18. Former permanent station was Portland, Maine.

Speedwell (WAGL-245)

At Naval Shipyard, Charleston, S. C., for decommissioning for disposal.

Sweetgum (WAL-309)

Placed "in commission, in reserve" on April 14 at Mayport, Fla., her permanent station.

Mohican (WYT-73)

Permanent change of station authorized from New York, N. Y., to Norfolk, Va., on April 10.

Navesink (WYT-88)

Permanent change of station authorized from Norfolk, Va., to New York, N. Y., on April 10.

CG-65025-D

Permanent change of station authorized from New Orleans, La., to Morgan City, La.

CG-65300

Decommissioning for disposal authorized on April 10. Vessel currently stationed at San Pedro, Calif.

Acushnet (WAT-167)

Delivered *Yamacraw* (WARC-333) to Naval Shipyard, Charleston, S. C., from San Francisco, Calif., on April 17 for completion of repairs and alterations. Arrived Yard on April 19 for completion of alterations prior to departure for new permanent station, San Juan, P. R.

Lightship No. 54

Declared available for disposal on April 15.

Air Snipe (WAVR-465)

Declared available for disposal on April 15.

Air Starling (WAVR-467)

Declared available for disposal on April 15.

CG-83374

On April 15 ordered moved to Yard from Seventh District for decommissioning and disposal.

Snohomish (WUT-98)

Placed "in commission, in reserve" at Rockland, Maine, on April 21.

Golden Gate (WYT-94)

Sold at San Francisco, Calif., on April 8, having been decommissioned November 22, 1945.

Air Sparrow (WAVR-466)

Decommissioned for disposal April 16-22 at Kennydale, Wash.

Air Warbler (WAVR-477)

Decommissioned for disposal April 16-22 at Kennydale, Wash.

Air Martin (WAVR-438)

Decommissioned for disposal April 16-22 at Kennydale, Wash.

*Air Rook (WAVR-459)*

Decommissioned for disposal April 16-22 at Kenneydale, Wash.

Ilex (WAGL-222)

Decommissioned for disposal April 17 at Charleston Naval Shipyard. Former permanent station Galveston, Tex.

Alert (WSC-127)

Placed "in commission, in reserve" April 24 at Alameda, Calif.

Mocoma (WPG-163)

Departed Yard April 24 for 2 weeks shake-down cruise. Assigned permanent station at Miami, Fla., effective on date of commissioning March 21, 1947.

CHANGES IN ASSIGNMENT

Rear Adm. Wilfrid N. Derby, to be designated Superintendent of the Coast Guard Academy, about August 25.

Commander Christopher C. Knapp, from headquarters, Enlisted Personnel Division, to Naval War College, Newport, R. I., for course in logistics.

Lt. Comdr. Charles O. Ashley, from San Pedro Repair Base to Eleventh Coast Guard District Office pending further assignment.

Lt. Comdr. Clay Clifton (R), from marine inspection duty, St. Louis, to marine inspection duty, Nashville.

Lt. Comdr. Fred M. Cronab, from marine inspection duty Duluth, to marine inspection duty St. Ignace, Mich.

Lt. Comdr. John W. Schmoker (R), from marine inspection duty Nashville, to marine inspection duty Dubuque.

Lt. Comdr. Ernest J. Whelan (R), from marine inspection duty Chicago to marine inspection duty, Duluth.

Lt. Comdr. Samuel G. Guill from United States Army Military Government in Korea to Twelfth District office (marine inspection office).

Lt. Comdr. Harry L. Morgan from Fourteenth District office to Fourteenth District office (marine inspection office).

Lt. Comdr. Harrison N. Wilson, USCGR from Fourteenth District office (marine inspection office) to Twelfth District office.

HOME PENDING RETIREMENT

Capt. Clarence H. Dench.

Lt. Comdr. Ralph G. Jenkins.

Lt. Comdr. Lawrence W. Croteau.

Boatswain David S. Hendrix.

Chief Gunner Andrew H. Abraham.

Chief Pharmacist Robert J. Bussey.

DEATHS

Lt. Comdr. LeRoy A. Fuller.

Lt. (jg) Fred T. Coombe.

Lt. Charles W. Rinaca, USCGR (ret.).

